



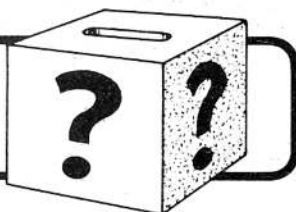
NUCLEAR DIVISION NEWS

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 5 — No. 21

November 7, 1974

QUESTION BOX



If you have questions on company policies, benefits, etc. or any other problems with which we might help, just let us know. Drop your inquiry to the Editor, **Nuclear Division News**. (Or telephone it in to your plant news representative.) You may or may not sign your name. It will not be used in the paper.

Questions are referred to the proper authorities for accurate answers. Each query is given serious consideration for publication.

Answers may be given to employees personally if they so desire.

QUESTION: Since antifreeze is going to be hard to get and expensive, why doesn't the Company sell Prestone to employees like they did back in the early 1950's?

ANSWER: Several employees have directed this type question to the Question Box and others have asked it of plant management at their facility. When the first Question Box question was received, we took the matter up with the proper people in our New York office. UCC Divisions other than Nuclear were also raising the same question with them. It was given serious consideration, but the decision was reached not to renew these sales at the present time. If at some future time Prestone sales to employees are renewed in other parts of the Corporation, this will be done in the Nuclear Division as well.

We understand there will be an article in the next issue of **Carbide World** directed to the antifreeze shortage. Elsewhere in this issue of **Nuclear Division News** is a statement from A. C. Egler who is President of the Home and Automotive Products Division, the Division responsible for Prestone sales, directed to the question of selling Prestone to employees.

QUESTION: I was told that an employee who has 30 or more years of Company service may take two weeks of PLV in conjunction with only one week of active vacation. Is this true? Why?

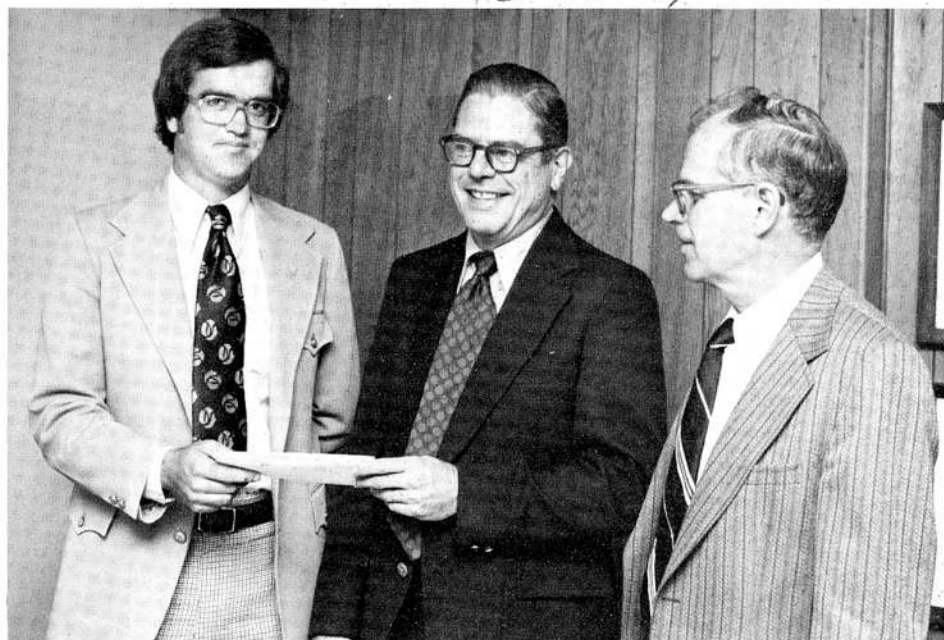
ANSWER: Yes, employees who complete 30 or more years' Company service, who have six weeks' annual vacation, may request two full weeks of pay in lieu of vacation (PLV) provided the request is made concurrently with one or more weeks of actual vacation.

Employees with 10 years' to 29 years' Company service, who are entitled to either four or five weeks' vacation, may take one week of pay in lieu of vacation. The extra PLV option for 30-year employees relates to their longer vacations and their longer service.

QUESTION: This is in reference to your September 5, 1974, article on promotions of hourly personnel to weekly positions. Why are hourly personnel considered for planner and estimator positions when no job bid has been placed for notification of other weekly personnel?

ANSWER: Several employees were promoted to planner and estimator, effective after the job posting system was placed in effect on July 1, 1974. However, all selections and commitments were made and promotions set to take place on June 1, 1974. Because of extenuating circumstances, it was impossible for the promotions to take place at that time. Because the commitments were already made prior to July 1, they were honored. No weekly roll jobs have been filled without fulfilling the rules and regulations of the job posting system.

(Continued on page 8)



PRESENTS CARBIDE UNITED FUND GIFT — A check for \$15,000 was presented to the Anderson County United Way by Roger F. Hibbs, Division President, as the corporation's contribution to this year's fund raising campaign. The presentation was made to Donald I. Carpenter, Chairman of the Anderson County Drive. From left are Carpenter, Hibbs, and George W. Evans, United Way Chairman for Carbide's three facilities in Oak Ridge.

United Way goal to be passed in final reports

The fourth weekly report for the United Way campaign shows nearly a half million dollars pledged to five UW funds . . . and the goal within reach. A total of \$413,566 has been reported toward the \$420,000 goal, or 99 percent! There are still more than nine percent of the cards outstand-

ing, and campaign officials were confident last week that the goal would be comfortably passed.

"I congratulate the three Oak Ridge installations on reaching this worthwhile goal," Roger F. Hibbs, President of the Nuclear Division,

(Continued on page 8)



FIRST PLANT OVER THE TOP! — The Oak Ridge Gaseous Diffusion Plant was the first of the four plants to reach its United Way goal. The team, whose efforts were responsible for the feat is seated, while divisional representatives are standing. From left, seated, are Luther B. True, treasurer; Evelyn Oswald, secretary; James D. Stout, Engineering chairman; Lee Porter, chairman; Gary A. Riser, co-chairman; and Robert E. Seyfried, publicity chairman. Standing are Gerald D. McCarthy, Separation Systems; Harry Sartelle, security and plant protection; Lonnie Anthony, computer sciences; Charles A. Levenhagen, Employee Relations; Marvin S. McCarty, Barrier Manufacturing; Carmon E. Houston, guard department; Faye Duncan, Planning and Analysis; John Gerwels, Laboratory; Bea James, Finance, Materials and Services; William H. McCulla, Gaseous Diffusion Development; George B. Kearns, Shift Operations; James E. Heiskell, Fabrication and Maintenance; and John Shoemaker, Operations.

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INDUSTRIAL PHOTOGRAPHY

SEPTEMBER 1974

16th Annual Industrial Film Awards

For Outstanding Achievement In
Industrial Motion Picture Production



THE BIOENGINEERS — The cover of *Industrial Photography* magazine for September 1974 features scenes from "The Bioengineers," a film produced by ORNL staff members. The film won two awards for outstanding achievement in industrial motion picture production. The "actors" are: (A) Lee Shugart, (B) Mel Stulberg, (C) David Novelli, (D) Floyd Culler and James Liverman and (E) A. Don Kelmers.

Industrial photography honors ORNL film, 'The Bioengineers'

"The Bioengineers," a motion picture produced by the motion picture section at Oak Ridge National Laboratory, has won the *Industrial Photography* magazine's top award for research and development films in its annual competition. The film also won the competition's "esteemed" Angenieux Award for the best creative cinematography.

In a fast-paced, popular-level, contemporary style, this 14-minute color film explores the combination of biology and engineering at ORNL, with special emphasis on the investigation of human cells. It shows multidisciplinary teams of scientists and engineers combining their talents to produce new research and diagnostic tools to aid in the study of molecular biology, and to help gain information that will aid in the relief of suffering and the control of disease.

"The Bioengineers" was written, directed, photographed and edited by Fleming Reeder, ORNL film consultant, and Edward Matney, a former ORNL employee. James L. Liverman, former ORNL Associate Director (now assistant general manager, AEC, Washington), served as technical advisor.

Distinguished judges

Judges of the competition (from New York University, Eastman Kodak and the Rochester Institute of Technology) commented on the "great cinematography." They noted "the outstanding attention to lighting subjects and finding interesting angles which contributed to an unusual consistency of fine camera work." The inclusion of details which promote believability and personalize a film were praised; "in one scene, for example, showing the selection of a new research site (the MAN Program) - an ancient unused

factory - a mass of pigeons are seen taking to the air as the scientists enter the building. Good sound and editing backed the photography up and were advantageous to a deliberately episodic production, which showed various groups of scientists dealing with each other on their own terms."

Scenes featured

In addition to receiving awards in the two categories, scenes from "The Bioengineers" were featured on the magazine cover and occupied another full page inside the magazine. (September 1974 issue).

"The Bioengineers," which was produced under the direction of the Information Division, also won the "coveted" Special Cup Award of the Ministry of Industry and Commerce at the 1973 International Educational and Television Film Show in Rome, Italy. The film has received high honors in the following competitions: the Chicago International Film Festival, the Atlanta Film Festival, the Rome Didactic Film Festival, the Information Film Producers Association of America Festival, and the Rio de Janeiro International Film Festival.

The Technical Information Center of AEC-ORO has 50 copies of "The Bioengineers" which are available to the public. Although the copies are booked up through next Spring, occasional cancellations occur. Organizations or individuals who would like to borrow the film should contact the Technical Information Center, P. O. Box 62, U. S. Atomic Energy Commission, Oak Ridge, Tenn. 37830 (telephone 615/483-8611, extension 3-4161).

Eblen, Leonard, Mrs. Marlar and Phillips in new ORGDP positions

Four promotions are announced at the Oak Ridge Gaseous Diffusion Plant.

Raymond E. Eblen has been named a supervisory trainee in the Barrier Manufacturing Division. A native of Roane County, he lives in Kingston, at Route 2. He came to ORGDP last year.

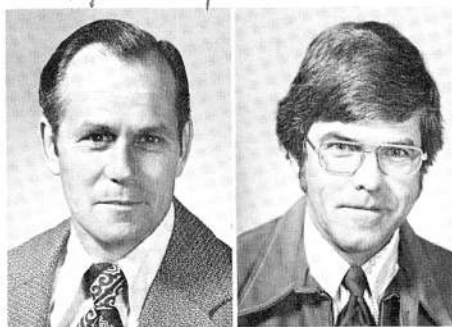
Mrs. Eblen is the former Nancy Vinyard, and they have three children, Donnie, Debra and Cathy.

Claude E. Leonard Jr. is a new laboratory technician in Separations Systems. Born in Dickinson, N.D., he lives at 126 Sheridan Circle, Oak Ridge. He joined Union Carbide 20 years ago.

Jessie Cox Marlar was named a laboratory aide in the Laboratory Division. A native of Waynesboro, Va., she lives at 618 Robertsville Road, Oak Ridge. She came to ORGDP earlier this year.

Her husband, Charlie L. Marlar Jr. works in the Y-12 Plant. They have four children, Judy Beaty, Donnie, Timmy and Gary Marlar.

Charles D. Phillips has been made a barrier foreman in the Barrier Manufacturing Division. Born in Wartburg, he joined Union Carbide in 1963 at



Eblen



Leonard



Mrs. Marlar



Phillips

ORNL, and transferred to ORGDP earlier this year.

Mrs. Phillips is the former Jane Hart Dillon, and they live at 102 Piedmont Road, Oak Ridge. They have two sons, Jeffrey and John.

Consider the postage stamp - its usefulness lies in its ability to stick to one thing until it gets there.

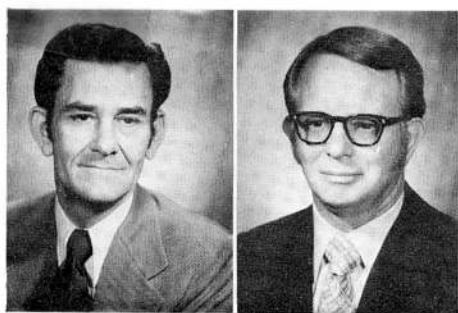
55 CENTS DIVIDEND DECLARED

The 230th consecutive dividend has been declared by the board of directors of Union Carbide, in the amount of 55 cents a share. This is the same as the last dividend paid on September 3, and makes a total of \$2.175 on a share paid this year.



CERTIFICATE OF RECOGNITION — Frank E. Gethers, Oak Ridge Gaseous Diffusion Plant, is again recognized by the National Alliance of Businessmen. The Separations Systems employee was cited for his work in motivating minority students to prepare for opportunities in business. Admiring the certificate, from left are, Edwin F. Babelay, Gethers, Robert M. Schilling and Irving C. Flanders.

Five new foremen are announced in Paducah's F & M division



Collins

Feezor



Hargrove

Hunt

Five new foremen have been named in the Fabrication and Maintenance Division at the Paducah Gaseous Diffusion Plant, according to Robroy Millican, division superintendent.

Alan L. Collins was named an instrument maintenance foreman. A native of Hickman County, he worked with the F. H. McGraw Company before joining Union Carbide.

Billy S. Feezor was promoted to a plant services foreman. Born in Kevil, he attended Purdue University and is a veteran of the U. S. Air Force. He also worked for F. H. McGraw before joining the Paducah organization.

Joe E. Hargrove, a newly appointed process maintenance foreman, was born and grew up near Barlow. He was employed by the Northern Steel Company before joining Union Carbide in 1952.



Smith

Marshall H. Hunt was promoted to a fabrication shop foreman. Born at Cunningham in Carlisle County, he still resides there.

Frankie L. Smith was named an electrical maintenance foreman. He attended the United Electronics school and worked for Claussner Hosiery before joining Union Carbide in 1959.

Savings Plan-Personal Investment Account

Recent unit values:

	Fixed Income Fund	UCC Stock	Equity Investment Fund
June 74	10.64	41.84	7.73
July 74	10.70	39.85	7.03
August 74	10.77	42.00	6.26
September 74	10.85	38.41	5.43

Note: Fixed Income Fund unit values reflect interest additions to achieve the guaranteed effective annual interest rate of 7-3/4% for 1974. Union Carbide stock values are the average cost of stock purchases during the month plus brokerage charges. Equity Investment Fund unit values represent the month-end market value of securities held by the Fund. Dividing the total value by the number of units in the fund establishes the month's unit value - and the price at which new units are added that month.



ANOTHER WISE OWL CLUB MEMBER — Ernest J. Shepherd, ORNL's Plant and Equipment Division, was recently awarded membership in the Wise Owl Club. Shepherd, a carpenter, avoided serious injury to his eyes by wearing safety glasses while attempting to open a sink drain at home. Shepherd poured a household drain cleaner containing sulfuric acid into the drain. Heat from the chemical reaction caused the solution to be blown out into his face. He sustained painful burns on his face, nose and arms, but his eyes were undamaged. Robert M. Farnham presents Shepherd (center) with his certificate while other members of the Building and Utilities Department look on.

ORNL's Reichle appointed to environmental studies board

David E. Reichle has been appointed to a three-year term on the Environmental Studies Board of the National Academy of Sciences. Reichle is program director for Ecosystem Analysis in the Environmental Sciences Division at Oak Ridge National Laboratory.

The ESB is part of the National Research Council's Commission on Natural Resources. The Commission is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering. Under supervision of the Commission, analytical and advisory studies in the broad areas of natural resources and environmental quality are carried out by panels of experts with diverse backgrounds, viewpoints and affiliations.

Responsibilities of ESB

The Environmental Studies Board has a wide range of responsibilities. It supervises scientific studies and evaluations on different topics in different areas. The ESB also serves both the Congress and Executive Branch of government as an advisory body on important and often controversial subjects. During the next few years, the Board will be deeply involved in studying the decision-making processes of the Environmental Protection Agency. It will also continue work in the fields of water pollution and air quality.

As a member of the ESB, Reichle will serve on the Committee for International Environmental Programs. The IEPC was established in 1970 in response to a need for scientific advice on environmental problems having international implications.

He also will be involved in other activities of the Board, including: study on pest control problems, committee on water quality policy, protocols for chemicals in the environment, and principles of decision-making for regulating chemicals in the environment.

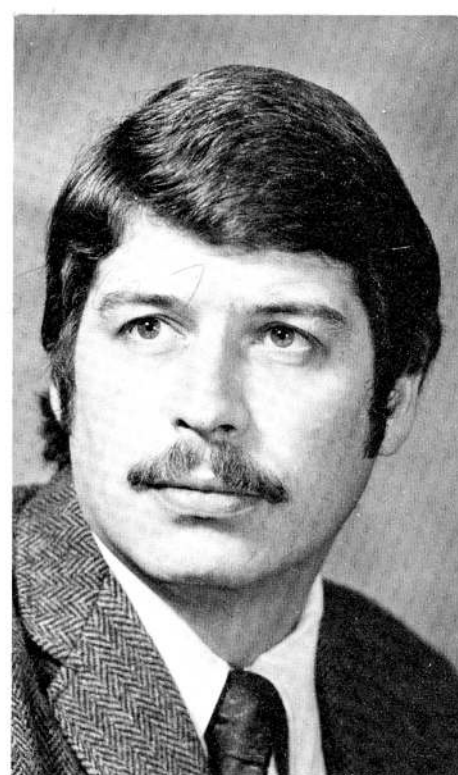
Was AEC postdoc fellow

Reichle, a native of Cincinnati, Ohio, has a B.S. degree from Muskingum College and M.S. and Ph.D. degrees in ecology from Northwestern University. He joined the ORNL staff in 1966, after conducting research there for two years under an AEC postdoctoral fellowship.

Reichle has served on a number of professional advisory committees for the AEC, National Academy of Sciences, The Institute of Ecology, and most recently the National Science Foundation's Science Research Advisory Committee.

Reichle has authored or coauthored approximately 50 technical publications, and is editor of a book, **Analysis of Temperate Forest Ecosystems**. He also serves as a lecturer in the Graduate Program of Ecology at The University of Tennessee.

He is a fellow of the American Association for the Advancement of Science, and a member of the American Institute of Biological Sciences, Ecological Society of



David E. Reichle

America, Society for Environmental Geochemistry and Health, Health Physics Society, INTECOL, Association of Southeastern Biologists, the Nature Conservancy, Audubon Society and the Society of Sigma Xi.

Reichle resides with his family at 112 Newcrest Lane in Oak Ridge.

WANTED



Y-12 PLANT

RIDER from Washington Pike, Whittle Springs, Arlington area, via Norwood, Clinton Highway to East, North or Central Portal, straight day. J. F. Baker, plant phone 3-5935, home phone Knoxville 637-1769.

RIDERS from Colonial Village, Vestal, Woodson Drive, Alcoa Highway areas, Knoxville, to East or North Portal, 8 a.m. shift. Harvey Wyrick, plant phone 3-5961, home phone 573-1134.

ORNL

CAR POOL MEMBERS from Fountain City area (the Duck Pond), Knoxville, to East Portal, 8 a.m. shift. Doug Parrish, plant phone 3-1962, home phone 688-4869; or Jeff Hill, plant phone 3-1962, home phone 688-6630.

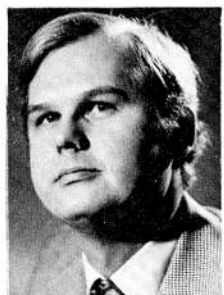
RIDE or JOIN CAR POOL from 100 Oklahoma Avenue (west end), Oak Ridge, to East or South Portal, 8:15 a.m. shift. Edith Jones, plant phone 3-1567, home phone 482-1224.

ORGDP

RIDE or car pool member from Clinton Highway-Emory Road area to Portal 4, 8 a.m. shift. Douglas Nelson, plant phone 3-3286.

Gregory Yurek receives ASM's H. M. Howe Medal

Gregory J. Yurek, ORNL's Metals and Ceramics Division, is co-recipient of the Henry Marion Howe Medal for 1974. The award was presented by the American Society for Metals at its Awards Convocation held in Michigan recently.



Yurek

The Henry Marion Howe Medal was established in 1923 and is presented annually to the author(s) of the paper of highest merit published in *Metallurgical Transactions* the previous year.

Co-authors of Yurek paper, "Displacement Reactions in the Solid State," are Robert A. Rapp, Ohio State University, and Andre Ezis, Ford Motor Company. The Henry Marion Howe award consists of a certificate and a medal.

Yurek, who joined the ORNL staff in August of this year, has B.S. and M.S. degrees in metallurgy from the Pennsylvania State University and a Ph.D. degree in metallurgical engineering from Ohio State University. He did research on diffusion in ionic solid solutions as a NATO post-doctoral Fellow at Technische Universität Clausthal in West Germany.

Yurek is a member of the American Society for Metals, the Metallurgical Society of AIME, the Electrochemical Society, Sigma Xi, Alpha Sigma Mu and Tau Beta Pi.

He and his wife reside at 417 Echo Valley Road, Knoxville.

RETIRED CARPENTER DIES

Olie C. Watkins, a retired ORGDP carpenter, died at his Clinton home October 13. He retired after 15 years at ORGDP, and had previously worked with the Southern Railroad Company. He is survived by a son, Kack S. Watkins; four daughters, Loretta Henderson, Claudia Perry, Helen Weaver, and Ollie Butturini. Burial was in Sunset Cemetery.

NUCLEAR DIVISION NEWS

UNION
CARBIDE

Published twice-monthly for

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UNION CARBIDE CORPORATION
NUCLEAR DIVISION

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VISITS PADUCAH FACILITIES — William B. Nicholson, Vice Chairman of the Board of Directors of Union Carbide Corporation, visited facilities at the Paducah Gaseous Diffusion Plant recently. From left are Nicholson; Roger F. Hibbs, President of the Nuclear Division of UCC; Clyde C. Hopkins, Paducah Plant Manager; Charles J. Parks, Vice President of Operations of the Nuclear Division; and Herman Postma, Director of Oak Ridge National Laboratory.

Prestone shortage detailed by UCC

The Home and Automotive Products Division has made a most thorough study to determine if it would be possible for the Corporation to arrange to sell PRESTONE to its employees. We have reviewed our entire sales and production situation for the balance of the 1974-1975 season, and must regrettably conclude that it will not be possible to obtain supplies for such sales during the current season. Literally every drop of production has been committed to our customers.

Several factors have combined to create the present tight supply situation: DuPont's sudden withdrawal from the market; an industry-wide shortage of capacity for production of ethylene oxide, from which we derive ethylene glycol, the principal ingredient of anti-freeze; the rapid growth in consumption of man-made fibers such as polyester, which is also derived from ethylene oxide; the growing number of vehicles using winter/summer coolant.

Union Carbide has several expansions under way to increase ethylene oxide capacity. We are making every effort to inform the public that, while supplies of PRESTONE anti-freeze are tight this fall, there is not and will not be a severe shortage. We hope our employees will help us to spread the word that panic buying or hoarding are completely unnecessary and will only result in needless reductions of available stocks.

We are confident that the steps we are taking to improve the supply-demand picture will be successful, and that our strategy for supplying the anti-freeze market will fully meet the needs of Union Carbide employees as well as the buying public in general.

RETIRED PADUCAH EMPLOYEE

William N. Turk, who retired from the Paducah Plant in October, 1963 died October 3. He was an employee of the Plant Services Department for 10 years. Mr. Turk, who lived in Bardwell, Ky., is survived by his wife, Marie and one daughter.

Calendar of EVENTS

TECHNICAL

November 7-8

Micrographics Seminar III: East Auditorium, Building 4500N, 9 a.m.

November 12

Analytical Chemistry Division Seminar: "Coal Liquifaction," John M. Holmes. East Auditorium, Building 4500N, 1:30 p.m.

University of Tennessee Department of Chemistry General Seminar: "Mechanistic Studies of the Coupling of Alkyl Groups via Organocopper, Silver and Gold Intermediates," Prof. J. K. Kochi, Indiana University. 414 Buehler Hall, UT Campus, 4 p.m.

November 13

Biomedical Graduate School Student Seminar Series: "Some Problems in Photosynthesis," W. A. Arnold. Large Conference Room, Building 9207, 3 p.m.

November 13-15

Metals and Ceramics Information Meeting: Oak Ridge National Laboratory.

November 14

Biomedical Graduate School Seminar: "Reappearance of Neonatal Sensitivity to an Oncogenic Virus in Senescent Mice as a Specific Consequence of Immunologic Decay," Nelson Pazmino. Tower I Conference Room, Building 9207, 12:15 p.m.

November 18-20

Biology Division Information Meeting: Oak Ridge National Laboratory.

November 19

Analytical Chemistry Division Seminar: "New Methods in Infrared and Fluorescence Spectroscopy: Projected Applications to Analyses of Particulate Polycyclic Organic Matter," E. L. Wehry, University of Tennessee. East Auditorium, Building 4500N, 1:30 p.m.

November 21

Gas-Cooled Reactor Programs Bimonthly Information Meeting: "Gas-Cooled Reactor Analytical Chemistry Development Programs," D. A. Costanzo; "Statistical Basis for

Irradiated Microsphere Gamma Analyzer System," K. H. Valentine; "PCRV Development Program," J. P. Gallahan; "HTGR Fuel Refabrication Development," J. D. Sease. East Auditorium, Building 4500N, 9 a.m.

COMPANY Service

20 25 30

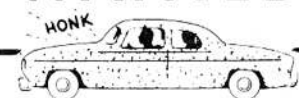
ORGDP 30 YEARS

Andrew E. Heflin, fabrication shop; Clarence W. McNelly, traffic, receiving and shipping; William O. Goforth, fabrication shop department; James V. Hackler, grounds maintenance; Will V. Cook, instrument fabrication; George H. Miller, Oak Ridge area electricity distribution; Austin H. Rucker, mechanical services; John H. Epling, utilities operations; Charles R. McKelvy, chemical operations administration; Larry C. Patrick, mechanical services; and Nathan C. Crutcher, shop services department.

25 YEARS

Robert M. McGill.

WANTED



ORGDP

RIDE from Cherokee Subdivision, off Clinton Highway, Powell, to Portal 2 or 4, straight day. Evelyn Cole, plant phone 3-3545, home phone Powell 947-3361.

RIDE or car pool members from Hackberry Road, Karns area, to Portal 6, straight day. Susan Branam, plant phone 3-3221, home phone Knoxville 588-7269.



Jones

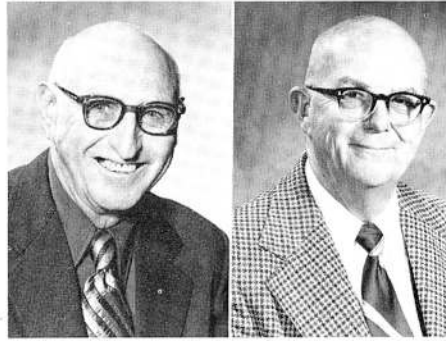
Charlie H. Jones, a senior laboratory technician in the Chemical Technology Division of ORNL, retired November 1 with more than 29 years of company service. Jones lives at 804 Patton Ferry Road, Kingston.

Three Y-12 veterans retired October 31, with a combined 68 years of company service.

FORMER ORGDP GUARD

Grant F. Butler, retired from the guard department at the Oak Ridge Gaseous Diffusion Plant, died October 9, at his Ball Camp Pike, Knoxville, home. He is survived by three sons, Otis, Frank Butler and Carl F. Butler, a Y-12 employee; two daughters, Edna Tayntor and Hazel Newman. Funeral services were held at the Tekoa Baptist Church, with burial in Highland Memorial Garden.

What availeth it if we become so engrossed in the pursuit of business or of money for its own sake, after we have earned a competency, if this pursuit unfits us for the enjoyment of the real, deep, satisfying things of life, if it blinds our eyes, warps our souls and numbs our better senses and sensibilities? The be-all and end-all of life should not be simply to get rich, but to enrich the world . . . B. C. Forbes



Clotfelter

Martin



Wilson

Robert U. Clotfelter, building, grounds and maintenance shops, came to Y-12 in 1951. He retires to his Route 4, 4721 MacMont, Powell, home.

Keith F. Martin, electrical and electronics department, joined Union Carbide in 1951 also. He lives at Route 2, Louisville, Tenn.

Glenmore G. Wilson, buildings, grounds, and maintenance shops, lives at Route 7, Mandalay Road, Knoxville. He has been in the Y-12 Plant more than 22 years.

Next Issue

The next issue will be dated November 21. The deadline is November 13.

Googin, Gray, Weir elected to 'fellowship' in the ASM

107228

Three Nuclear Division employees have been elected "Fellows" of the American Society for Metals. They are John M. Googin, senior staff consultant, Technical Division (Y-12 Plant); Robert J. Gray, supervisor of the metallography laboratories in ORNL's Metals and Ceramics Division; and James R. Weir Jr., Director of the Metals and Ceramics Division at ORNL.

The American Society for Metals established the honor of Fellow of the Society to provide recognition of members for distinguished contributions in the fields of metals and materials and to develop a broadly based forum for technical and professional leaders to serve as advisors to the Society.

James R. Weir has degrees in metallurgical engineering from the University of Cincinnati and The University of Tennessee. He is also registered as a professional engineer by the state of Tennessee. He came to work at ORNL in 1955.

Recipient of the AEC's E.O. Lawrence Award in 1973, Weir has been credited by experts in the metallurgical field as the investigator most responsible for the development of corrective methods for overcoming the high-temperature embrittlement of stainless steel and nickel-base alloys resulting from neutronically-generated helium.

Weir holds membership in the following professional organizations: American Society for Metals, Sigma Xi, American Association for the Advancement of Science, American Welding Society and American Nuclear Society.

He is the author of more than 80 publications and has been granted several patents.

John M. Googin is a graduate of Bates College, and holds a Ph.D. in physical chemistry from The University of Tennessee. He began his career at the Y-12 Plant in 1944. He also received the AEC's Lawrence Award in 1967, citing him for contributions in chemistry and metallurgy.

Googin is a member of the American Association for the Advancement of Science, American Chemical Society, and the Scientific Research Society of America. He holds or is co-holder of a dozen or more patents and has contributed to many publications. Some of his contributions include the development of a production process for the separation of zirconium and hafnium and the design of the first production plant for their separation; the development of many techniques of metal working and ceramic production to meet the demands of the nuclear weapons program; and the development of a much improved process for lithium isotope separation and the specifications of many of the design and operating parameters of the production plants.

Robert J. Gray has a degree in biology and chemistry from Sterling College, Sterling, Kan. He joined the staff at ORNL in 1948 after working at



Weir

Googin



Gray

the Naval Proving Grounds in Dahlgren, Va., and the American Brake Shoe Research Laboratory.

Gray has dedicated his career to advancing the art and science of metallography. He is a charter member of the International Metallographic Society. Awards he has received include the Francis F. Lucas Award for excellence in metallography (which he received four times) from the American Society for Metals and the 1973 Leitz Award from the Canadian ASM.

Gray has served in various leadership capacities for the ASM and IMS. He is currently the associate editor of *Metallography*, a technical publication of IMS, and is on the editorial advisory board of *Practische Metallographie*, a technical publication in Stuttgart, Germany. The author of over 70 technical papers on various aspects of metallography, Gray has presented talks and seminars to more than 30 ASM chapters and six universities on progress and development in his field.

Hopkins, Mrs. Lester speak to FSA group

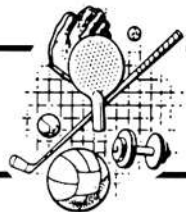
Approximately 44 members of the Future Secretaries Association from the Lone Oak and Tilghman High School chapters were initiated in joint ceremony at the Paducah City Hall recently.

Clyde C. Hopkins, Paducah Plant Manager, and his secretary, Betty Lester, spoke to the initiates, their parents and members of the Paducah-Kentucky Lake Chapter of the National Secretaries Association (International), who sponsors the group, on the subject of the secretarial profession.



EDUCATIONAL ASSISTANCE — Charles E. Knight Jr., Y-12 fabrication systems development, received his Ph.D. degree in engineering mechanics recently from The University of Tennessee, accomplishing all of the required graduate work while still working at the Y-12 Plant. In accordance with the Educational Assistance Program, he is reimbursed for the second 50 percent of the costs of attaining the degree. He is seen, second from right, receiving his check and congratulations of co-workers. At left is Fred W. Jones, department superintendent; W. Jack Yaggi, Development Division superintendent; and at right is William S. Dritt, department section head.

RECREATIONOTES



ORGDP BOWLING

The ORGDP Women's League sees the Uptowners in first place with the Spotters and Payoffs close behind. Elaine Griffies' 208 scratch game was high on a recent night of competition.

The Tuesday League pits the All Stars away in front, almost 20 points ahead of the Atoms. M. S. Ginsburg recently set the alleys ablaze with games of 253 scratch, 278 handicap . . . series of 603, 678.

Seth Wheatley was the hot bowler recently in the Wednesday League. He had a 227/249 game and a 615/681 series. John Pier had a 242/263 game, but was bowling as a sub. The Mix-Ups take a slight lead over the Planners.

ORNL BOWLING

The Woodchoppers still head up the crowd in the A League race. ORAU is in second place still and Ten Pins and Half Frames follow closely behind.

Al Ryon rolled a C League hot night recently . . . games of 238, 201 and 168 for a total of 607. The Damagers take the lead about five points away from the Pin Heads.

ORNL Ladies lead belongs to the Pick-Ups, two ahead of the Bowling Aces. Mary Long's 209, 252 games . . . series of 517, 644 lead the field on a recent night.

The Family Mixed Bowling League gets a new leader, as the Lucky Strikers take over the first place. Norman Teasley and Edith Duckworth were star bowlers recently.

PADUCAH BOWLING

Glen Young set the lanes afire in Paducah bowling circles recently, with a 680 handicap series, followed by Rob Riepe with a 669. The Scrapers, captained by Jack Weglarz, rolled high team scores with a 2430, followed by Jim Brown's Googins.

Captains have indicated that new bowlers are needed, either novices or experienced hands. Just contact any captain, or Leroy Hall, or call the Recreation Department on PAX 335/324.

PADUCAH CHRISTMAS PARTY

The Arcade Theater in Paducah will be the scene for the Saturday, December 14 party for children of Union Carbide employees in the Paducah area. Featured will be cartoons, Santa Claus, presents, etc. Doors will open at 8:30 a.m. for the 9 a.m. party. Requests must be in by November 26. (An application appears below.)

Children in the Oak Ridge area will be feted at parties on Monday, December 23, at the Oak Ridge High School. An application will appear in the next issue of **Nuclear Division News**.

COMPANY Service

20 25 30

GENERAL STAFF 30 YEARS

Ruth M. Rigdon, General Accounting Division; and Joe N. Kelley, Purchasing Division.

Y-12 PLANT 30 YEARS

T.J. Bush, guard department; Charles E. Muzzall, Development Division; Ruby K. Jones, Beta 2 chemistry; Andrew Alfred, dimensional inspection; and Walter E. Gary, Development Division.

25 YEARS

Clayton E. Wilson and Clarence E. Legg.

20 YEARS

Charles J. Hickey, Theodore D. Goodman Jr., Richard H. Dean, Joseph W. Beever, Freddie Jeffers, Roy J. West, Robert V. Walker, Arver G. Steele Jr., Curtiss R. Gasaway, Carl T. Selvidge, Earl E. Goodman and James R. McNabb.

ORNL 20 YEARS

Raymond M. Evans, John H. Gibbons, C. Ward Bandy, Faine J. Malone, Robert K. Branam, Reginald H. Miles, Leslie C. Jenkins and Alden V. Wilder.



HOLIDAY HAPPENING — Oak Ridge Gaseous Diffusion Plant employees plan another Holiday Happening Saturday, December 21, at the Oak Ridge Civic Center. Tickets will be available next week from ORGDP divisional representatives. Scenes from a previous party are shown above.

HOLIDAY HAPPENING FOR ORGDP EMPLOYEES

The Oak Ridge Civic Center will be the scene for the annual ORGDP Christmas Dance on December 21. Harold Osborne, General Purchasing Agent, chairman for the dance, is making arrangements for the event for K-25 employees, spouses and friends.

Celebration will get under way at 8:30 p.m. with a social hour. Dancing to the music of Dick Jones will begin

at 9:30 and continue to 12:30.

Special treat for the "now" generation - the Night Shift will be performing during the Dick Jones breaks.

Division representatives will have tickets for sale starting November 14. The limit is 650 - no reservations.

Y-12 BOWLING

The Rollmaster and DLM Used Cars are tied for first place in the C League, with seven losses each. The Used Cars' Doyle recently posted games of 258 scratch, and 279 handicap. His 690 handicap series is high for the season thus far.

The Eightballs claim a three-point lead in the Classic race as the Playboys and Ridgers coast in second. Billy Sise has put a 680 handicap series on the top of the scales.

The Friskies take command of the Mixed League lead . . . as Russ Greeley's 686 handicap series looks good for this angle.

PADUCAH GOLF

Only three teams did not break par in the recent annual Village Greens scrabble golf tournament. The photo-finish saw four teams tied for top spot and low scores. The tie-breaking play gave the crown to Elvin Kuehn's team, consisting of Randy White, Clovis Green, Jerry Neale and Betty Brown. Van Bryant's team of Andry Mason, Bob Echols, Virgil Smith and Evelyn Miller had to settle for second place.

APPLICATION FOR TICKETS

Requests MUST Be In By November 26

PADUCAH CARBIDE CHILDREN'S CHRISTMAS PARTY
(For Children Ages 2-9)

SATURDAY, DECEMBER 14 9 A.M.

(Doors will open at 8:30 a.m.)

ARCADE THEATRE, PADUCAH, KY.



Employee's Name _____ Badge No. _____

Home Address _____

(Please Print Street Address or RFD, City and Zip Code)

Number of your children who will attend the party (please list):

(BOYS)		(GIRLS)	
NAME	Date of Birth	NAME	Date of Birth
NAME	Date of Birth	NAME	Date of Birth
NAME	Date of Birth	NAME	Date of Birth

List names, ages and sex of children very accurately. The information will be used to bring present records up to date.

NOTE: Fill out form completely and return as soon as possible, but not later than November 26, to the Recreation Office. Union Carbide Corporation, P. O. Box 1410, Paducah, Ky. 42001. Tickets will be mailed to parents at their home addresses.

The Medicine Chest

(Editor's Note: Dr. Lincoln alternates his regular column with "The Medicine Chest," where he answers questions from employees concerning their health in general. Questions are handled in strict confidence, as they are handled in our Question Box. Just address your question to "Medicine Chest," NUCLEAR DIVISION NEWS, Building 9704-2, Stop 20, or call the news editor in your plant, and give him your question on the telephone.)

By T. A. Lincoln, M.D.

QUESTION: "What causes halitosis and what is the best way to control it? Please print in your column. I'm sure others also want to know."

ANSWER: Bad breath or halitosis has many possible causes. Severe gum or tooth disease with a chronic infection may cause an odor. Food debris retained between the teeth long enough for bacterial decomposition to occur may be a source. Plaque which is a gelatinous accumulation of bacteria and salivary



mucin that forms on teeth shouldn't, by itself, cause halitosis, but if severe and associated with inflammation of the gums may be a cause. Dentures, in spite of all the unfortunate TV advertising, are not a common source of mouth odor. Most dentures are kept far cleaner than normal teeth.

Much bad breath originates far beyond the mouth. A rare chronic infection of the nose and sinuses called atrophic rhinitis is associated with a severe odor. It has been called "stink nose." Chronic infections in the lungs, especially if associated with a cough productive of purulent sputum, may cause bad breath. Some aged people develop an atrophic gastritis and don't adequately digest some foods, especially fats, causing an odor. Garlic and onions have odoriferous substances which after digestion are absorbed in the blood and then transferred to the expired air in the lungs. Medicines can be a cause of odor by this same mechanism.

A cause which should not be overlooked is exposure to selenium and tellurium. These materials are used in rectifiers in TV sets and in research laboratories. Selenium is a red coloring component in lipstick although it is doubtful if enough could be absorbed from this source to affect breath odor. Compounds such as selenium oxychloride, selenium dioxide and selenic acid and any of the tellurides produce a characteristic garlic odor to the breath. A popular anti-dandruff shampoo contains selenium and if used too frequently or heavily could lead to enough absorption to affect the breath.

Probably the most common cause of an obnoxious odor to the breath is smoking and chewing tobacco and drinking alcoholic beverages. A sweet, somewhat nauseating odor can often be detected in the breath of the reveler the "morning after."

Treatment of halitosis depends on the cause. It should be obvious that rinsing out one's mouth with a mouth wash cannot be expected to help for more than a moment or two. No mouth wash significantly reduces the numbers of bacteria in the mouth. Though we might like to think differently, the normal healthy mouth is loaded with bacteria no matter how often one brushes his teeth. The frequent development of wound infections following human bites is testimony to the bacterial hordes comfortably living in the mouth.

QUESTION: "If a person's body doesn't seem to have resistance to fight off infections and they occur quite frequently, does this mean that his or her body is lacking something and maybe vitamins would help?"

ANSWER: Chronic or recurrent infections may be the result of an undetected diabetes or a known case which is being inadequately treated. Often, recurrent infections are caused by an anatomical or physiological disturbance of normal secretion or excretion from a gland or organ. For example, when oil secretion in the skin of the face is excessive or gets trapped in blackheads, infection in the form of acne occurs. Another example is a recurrent cystitis which occurs when the bladder does not empty completely because of an enlarged prostate.

When specific tissues are deprived of an adequate blood supply, they are vulnerable to infection. Any time there is a severe infection, tissues may be permanently injured, making them vulnerable to reinfection. Excessive fatigue plus exposure to an ever-changing variety of respiratory viruses, which often occurs while traveling, predisposes a person to more frequent colds. Severe vitamin deficiency may result in more frequent infections, but this is fortunately rare in most areas in this country. Large doses of Vitamin C may reduce the severity and possibly the frequency of colds, but its action is not related to any deficiency. Anyone with recurrent infections should have a careful medical evaluation.



ORNL EMPLOYEES' OPEN HOUSE — Family day at the Oak Ridge National Laboratory, above, brought more than 5,000 visitors to the laboratory on October 13. ORNL employees were allowed to bring their families in for the annual event. Below, employees and their families are seen touring ORNL facilities in the Y-12 Plant the following Saturday, October 19, viewing Biology, Reactor and Thermonuclear Division facilities in that installation. More than 500 visitors were welcomed in Y-12.

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POSTING UP-DATED FIGURES — United Way pledges are posted on the roadway signs each week, describing progress in the current drive. From left are George W. Evans, drive chairman for the three Oak Ridge plants; Judy Self, secretary; and Charlie E. Robinson, vice president of the Atomic Trades and Labor Council. The colorful American heritage signs were designed by Robert E. Seyfried, ORGDP's graphic arts department, and executed in the Y-12 Plant's paint shop.

United Way

(Continued from page 1)

said last week. "It is gratifying to know that Union Carbide employees do care about the communities in which they live."

Meanwhile, Paducah officials said that their first reports were delayed, and computer read-outs were expected this week to reflect the first week of the drive. The Paducah campaign was not begun until mid-October.

The Oak Ridge plants boast 50 percent of employees giving their needed share.

County breakdown

A breakdown on the contributions shows that \$221,352 goes to Anderson County, almost 60 percent of that county's goal! More than \$103,000 is pledged to Knox County's UW appeal; \$17,968 to Loudon County; \$54,254 to Roane County (more than 50 percent of that county's goal); more than \$13,000 to Morgan County (which exceeds that county's entire goal!); and \$3,181 to other out-lying communities' UW drives.

The Oak Ridge Gaseous Diffusion Plant, the first installation over its individual goal, continues to lead the field - 114 percent over. The Oak Ridge Y-12 Plant is 101 percent over

its goal; and the General Staff is 112 percent past its aim. The Oak Ridge National Laboratory stands at 84.2 percent of its goal, with 15 percent of the lab still to be heard from.

Chairman comments

Last week's record-breaking \$413,566 pledged is already more than 13 percent over the total given in last year's campaign, and many employees are yet to report.

George W. Evans, chairman for the three-plant drive, praised the plant chairmen and their staffs last week. "It is because of this kind of effort that you are proud to be associated with your fellow workers. It has indeed been a joy working with the three Oak Ridge installations and to see the fruits of our efforts. My congratulations to everyone who gave, and particularly those who gave that extra ounce of energy to achieve this worthwhile goal. Our money will be well spent; we can all depend on that. And our communities will be better places because of our concern."

A final wrap-up, with complete details on the Paducah Plant drive, will be included in the next issue of the **Nuclear Division News**.

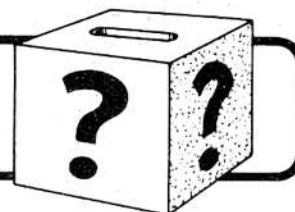
NUCLEAR DIVISION SAFETY SCOREBOARD

Time worked without a lost-time accident through October 31:

Paducah	85 Days	623,000 Man-Hours
ORNL	80 Days	1,366,484 Man-Hours
ORGDP	239 Days	4,371,000 Man-Hours
Y-12	506 Days	15,950,000 Man-Hours

Safety is everyone's concern!

QUESTION BOX



(Continued from page 1)

QUESTION: Oak Ridge National Laboratory and individual divisions of the Laboratory host many scientific meets a year. Most of these meetings are held in Gatlinburg and some as far away as Nashville. Why are the meetings not held in Oak Ridge where our economy could benefit by the influx of visitors? With the new motel in town accommodations should not be a problem.

ANSWER: Many of the smaller meetings hosted by ORNL or individual divisions are held in Oak Ridge. For example, division information meetings are typically held at ORNL and visitors attending those meetings are offered accommodations in Oak Ridge. In general, meetings of 200 or more cannot be easily accommodated locally because of limited meeting facilities and transportation problems. Gatlinburg is often used because it offers a wide variety of meeting facilities, restaurants, and motels all in close proximity so that persons attending the meeting can walk from place to place. In some cases, of course, ORNL acts as co-sponsor and the choice of a meeting site is made by others.

Carbide is not unmindful of the local economic impact resulting from

Company-sponsored meetings. However, the selection of a meeting place must of necessity be based on the needs of the particular conference.

QUESTION: A few years ago, we received a large sheet showing our fringe benefits, and an average income we might expect in our retirement plans. Since many of our benefits have changed, has any thought been given to a reissue of this literature?

ANSWER: We do plan on issuing "John Q. Carbide" statements to all employees later this year.

MAINTENANCE CLINIC

The Oak Ridge Section of the Instrument Society of America will hold a maintenance clinic at the Knoxville Vocational Technical School, Saturday, November 16. The clinic, featuring displays of various instruments, will also feature training films. The doors open at 9:30 a.m. in Room 205. There is no admission.

Love in old bachelors, like fire in old wood, once started is hard to put out.



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